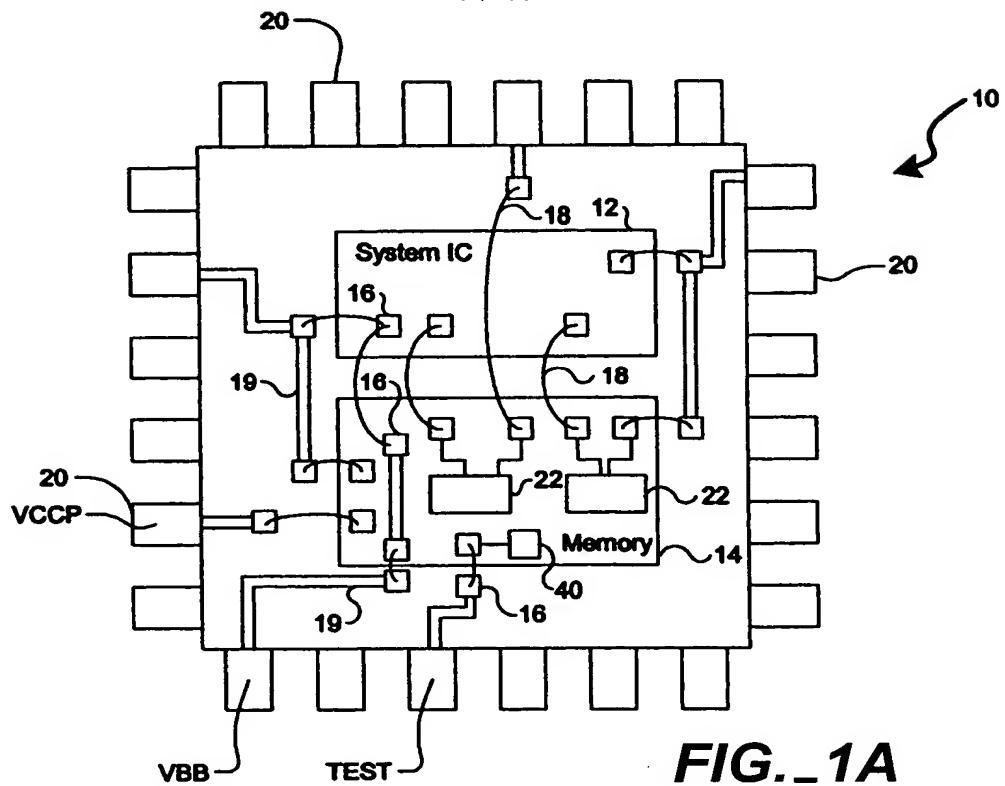


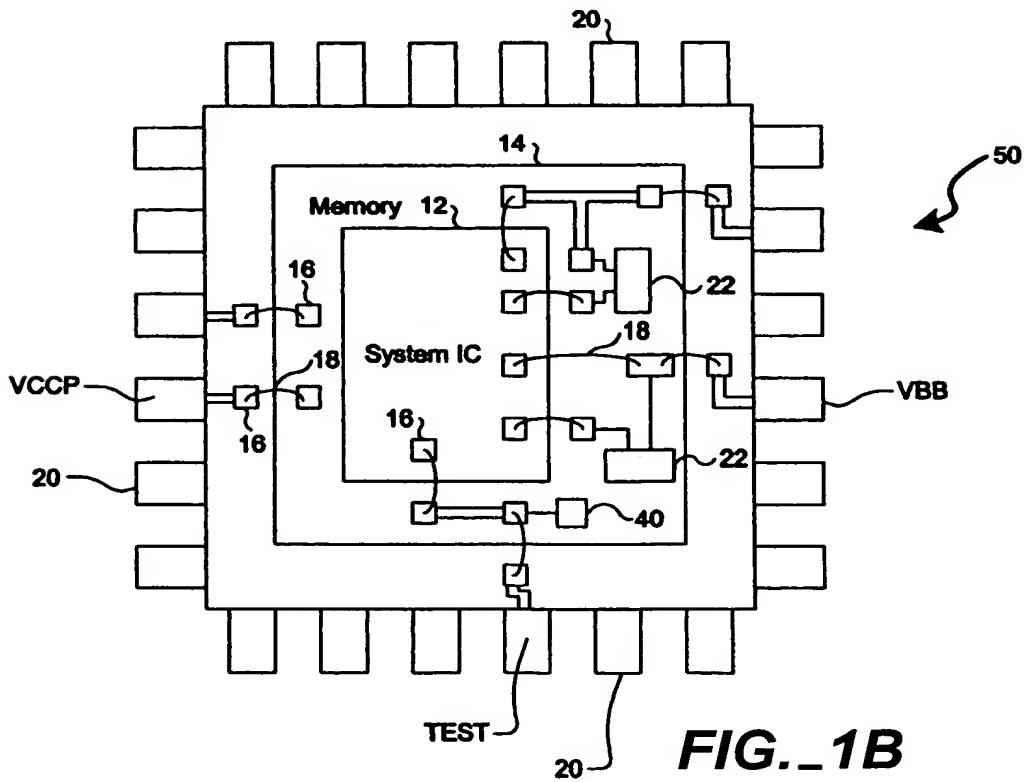


"Bonding Pads for Testing of a Semiconductor Device"  
 Inventor: Adrian E. Ong  
 Appl. Serial No.: 10/608,613  
 Sheet 1 of 17  
 Express Mail Label No.: EV 611 225 607 US

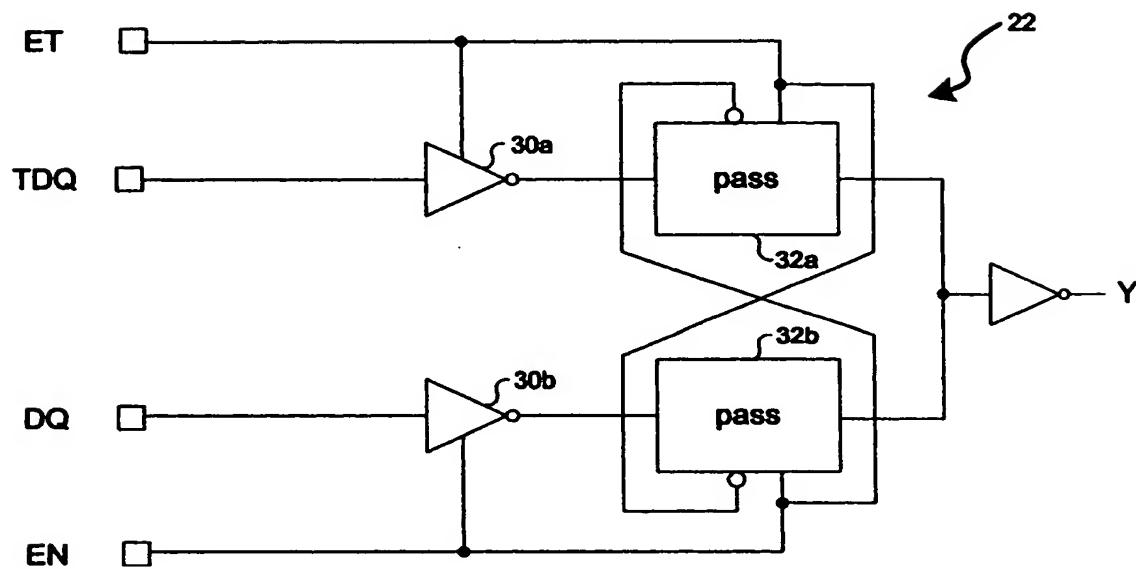
1 / 17



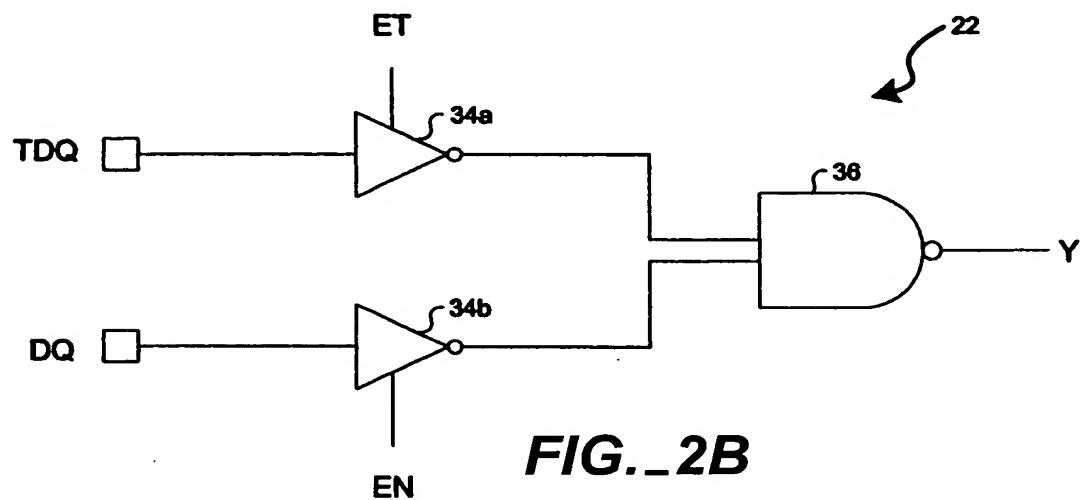
**FIG. 1A**



**FIG. 1B**

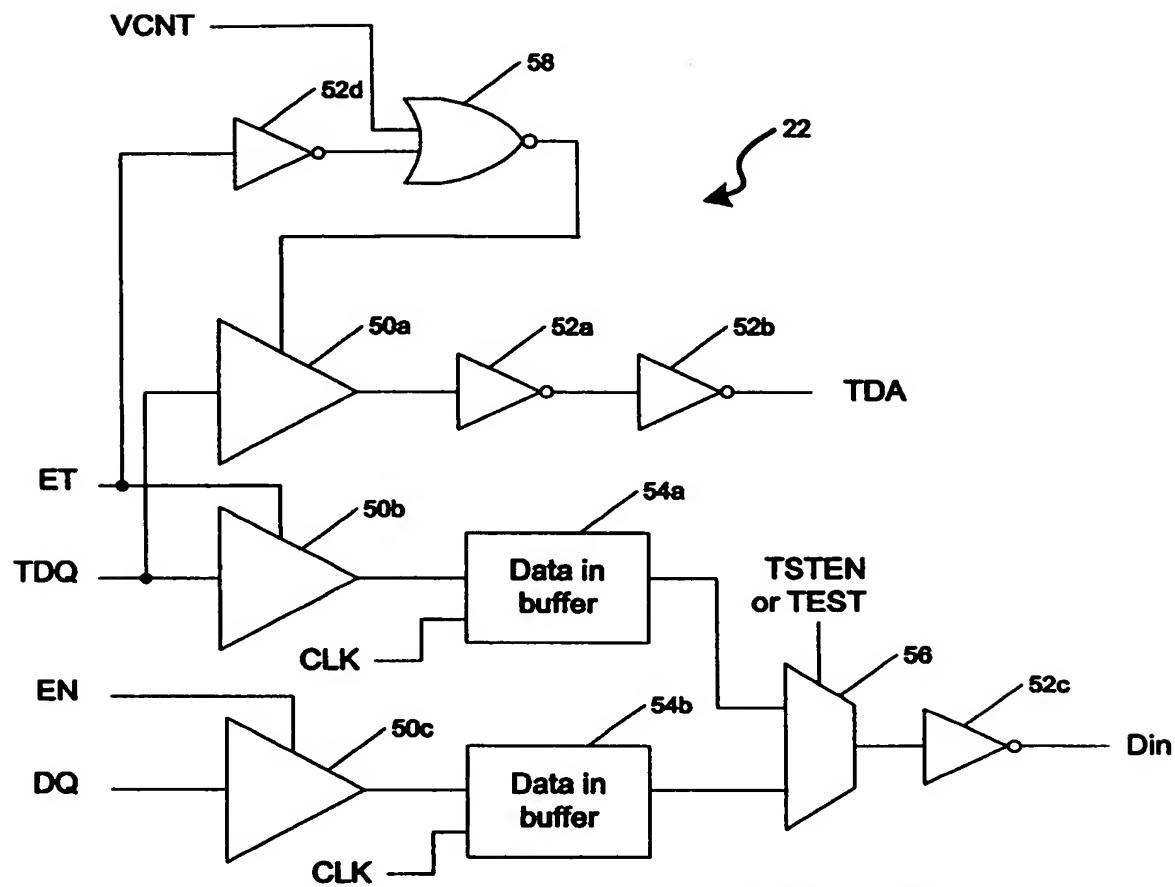


**FIG. 2A**

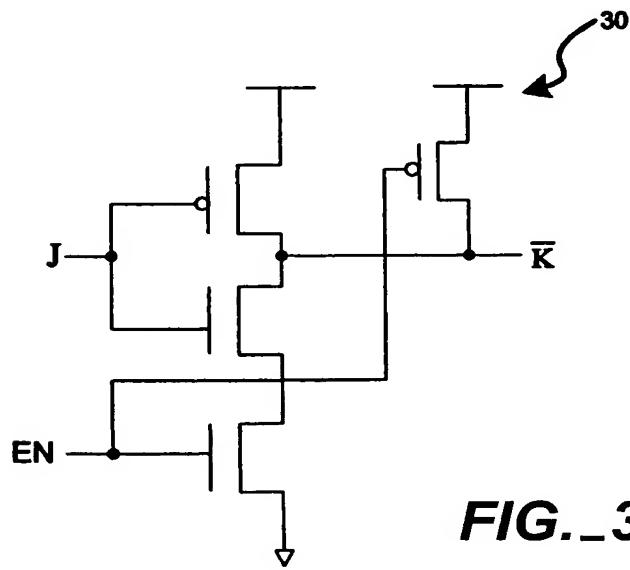


**FIG. 2B**

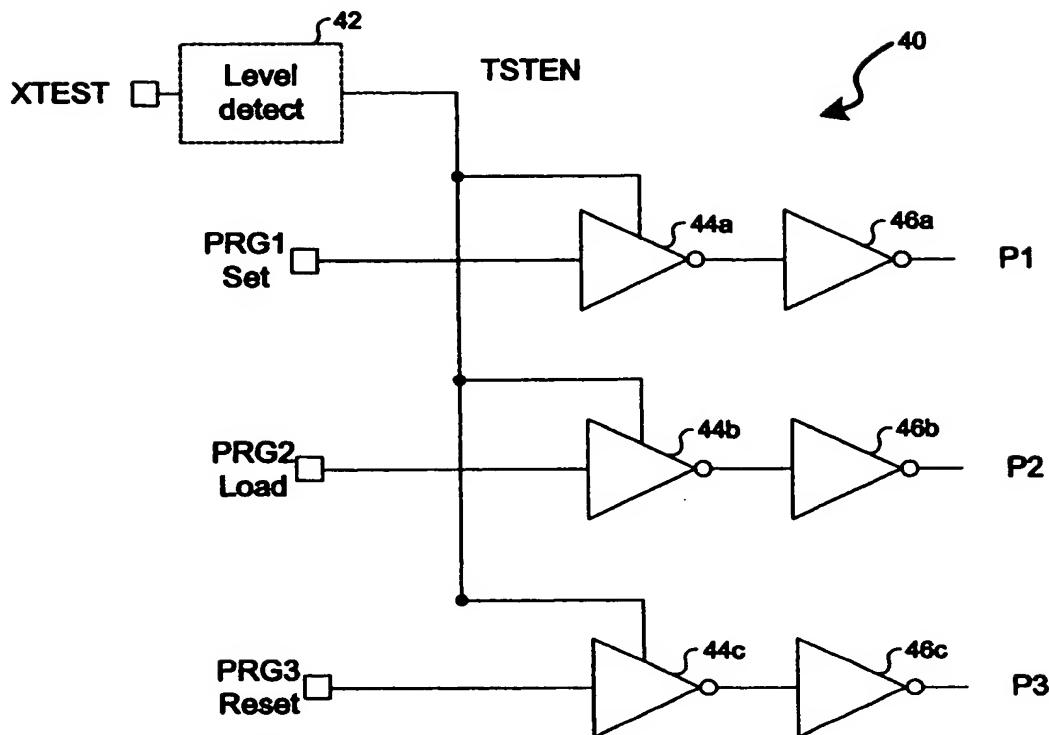
3 / 17



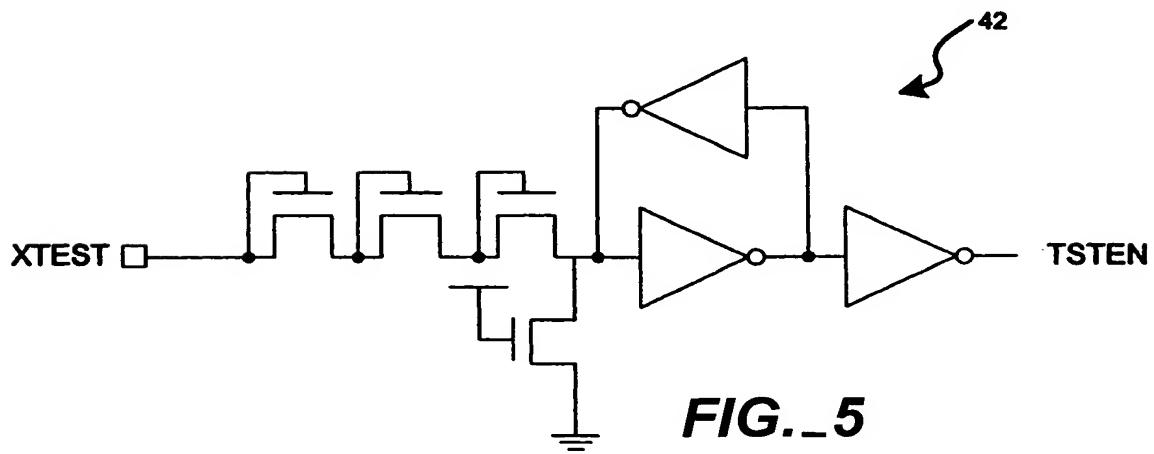
**FIG. 2C**



**FIG. 3**

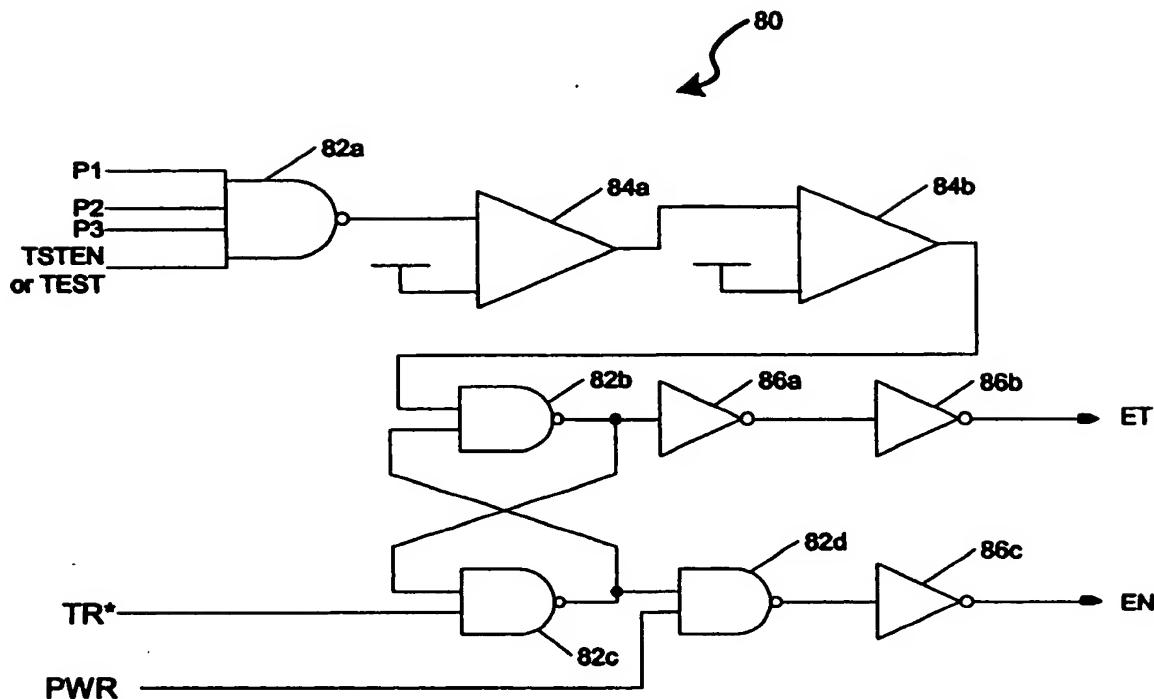


**FIG. 4**

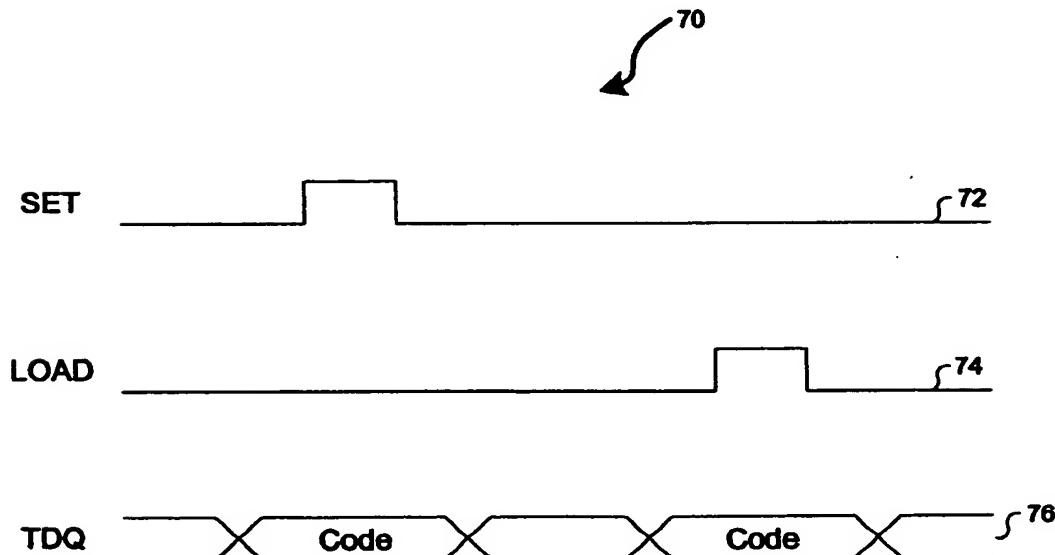


**FIG. 5**

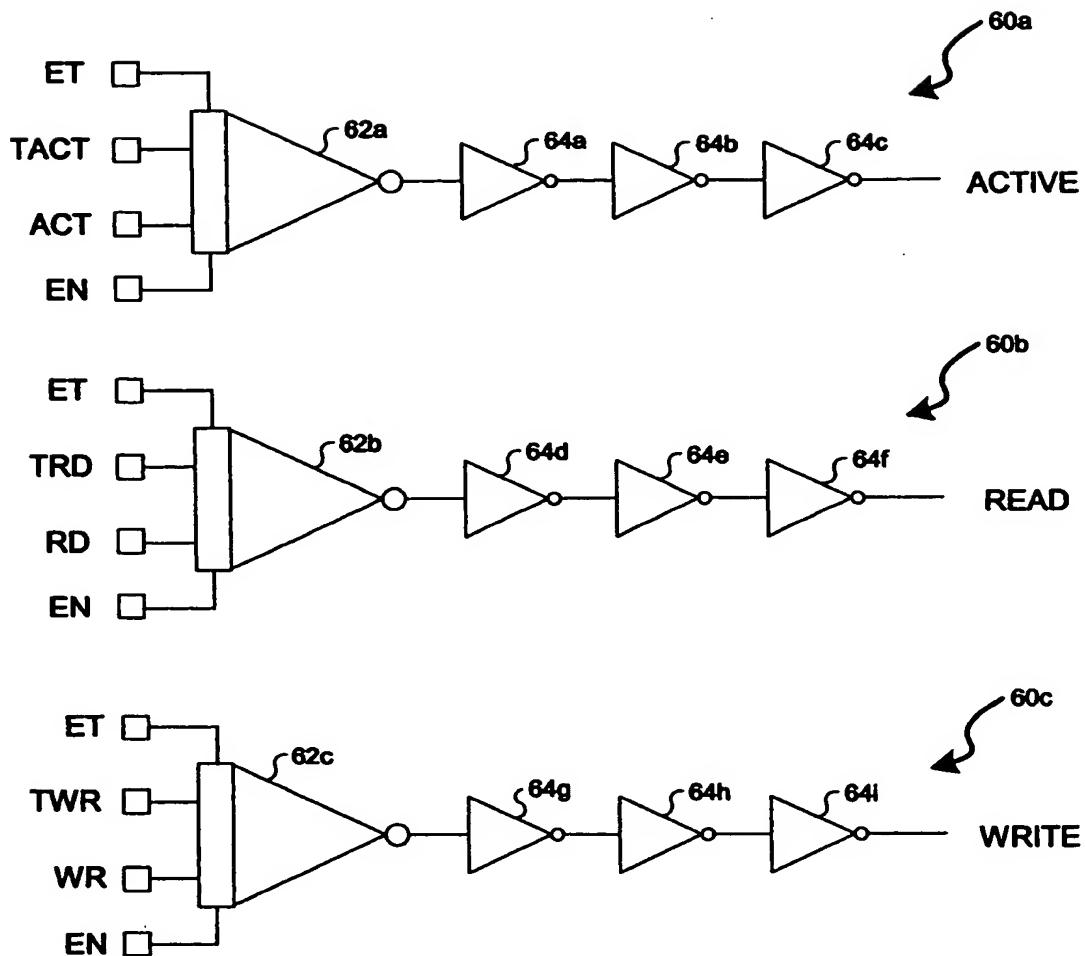
5 / 17



**FIG.\_6**



**FIG.\_8**



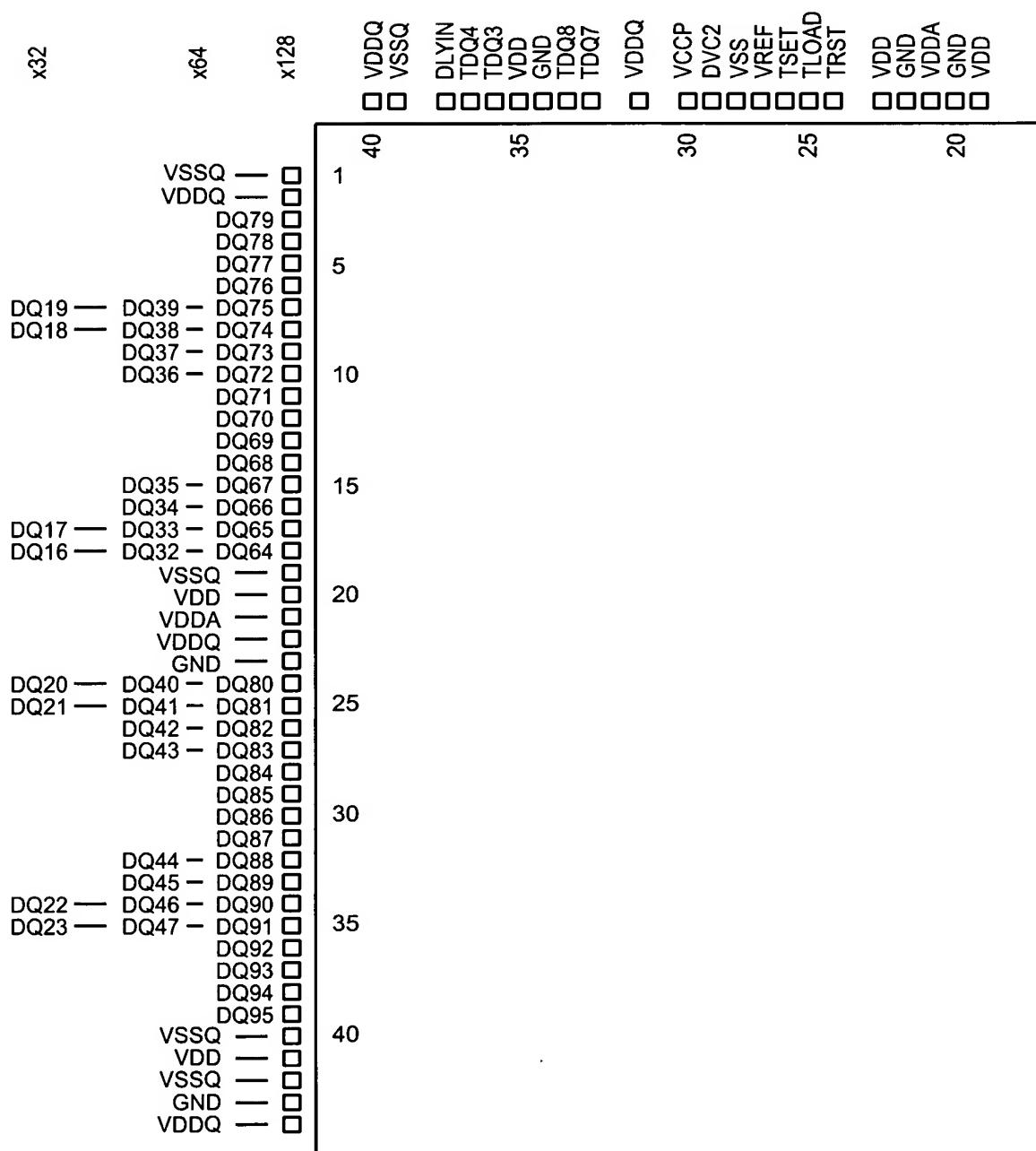
**FIG.\_7**

**FIG.\_9A**

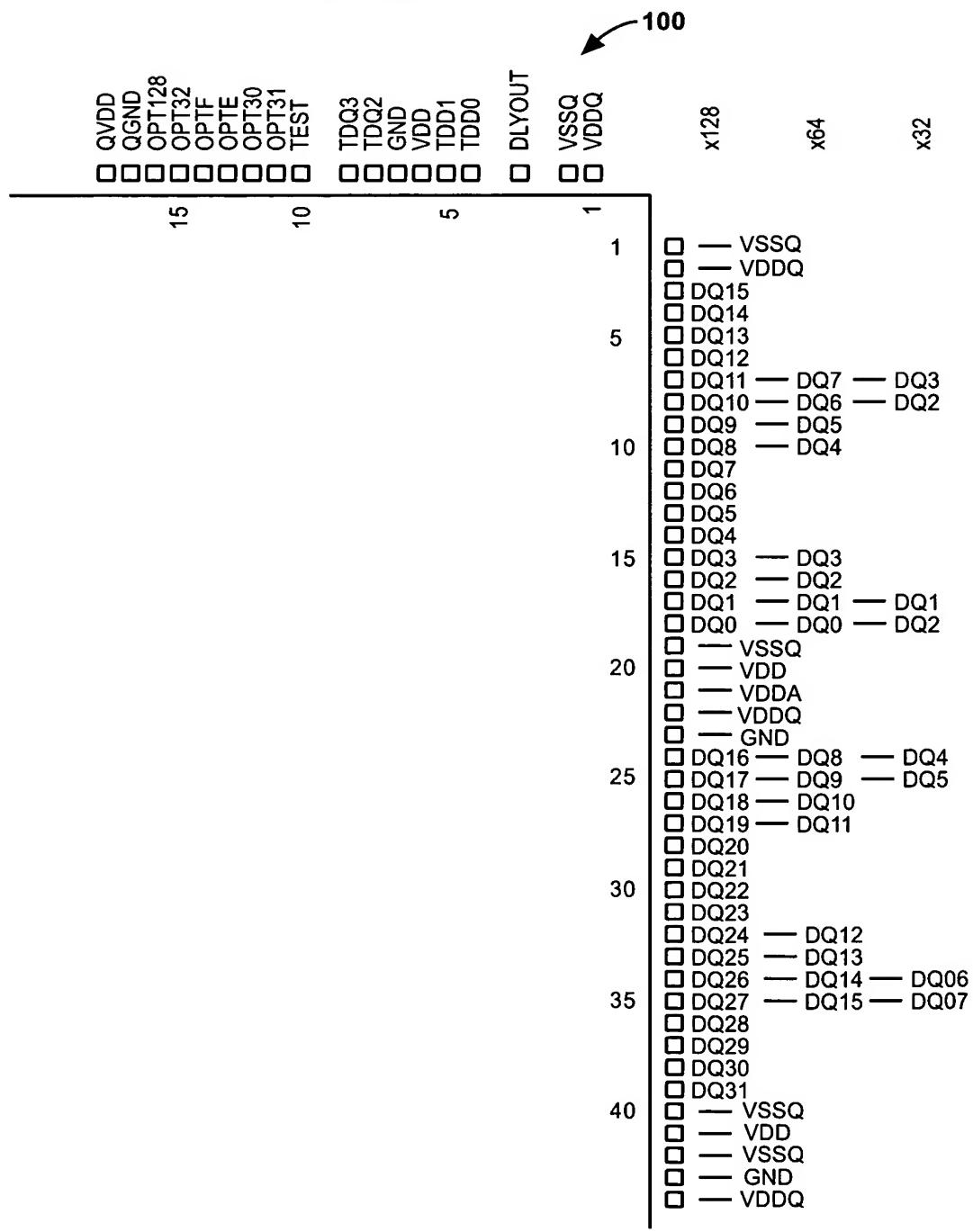
**FIG.\_9A-1** **FIG.\_9A-2**

**FIG.\_9A-3** **FIG.\_9A-4**

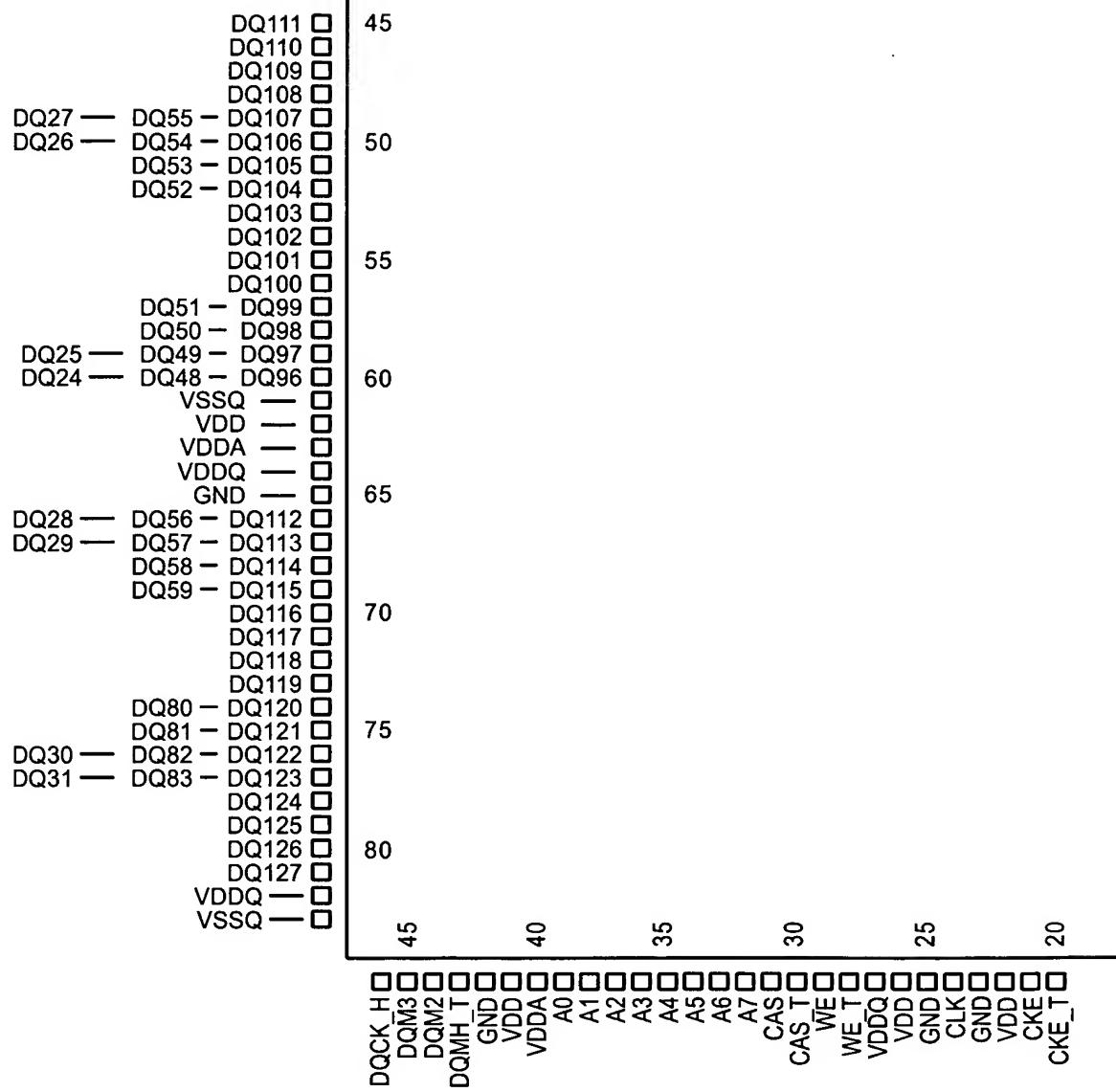
**FIG.\_9A-1**



**FIG.\_9A-2**

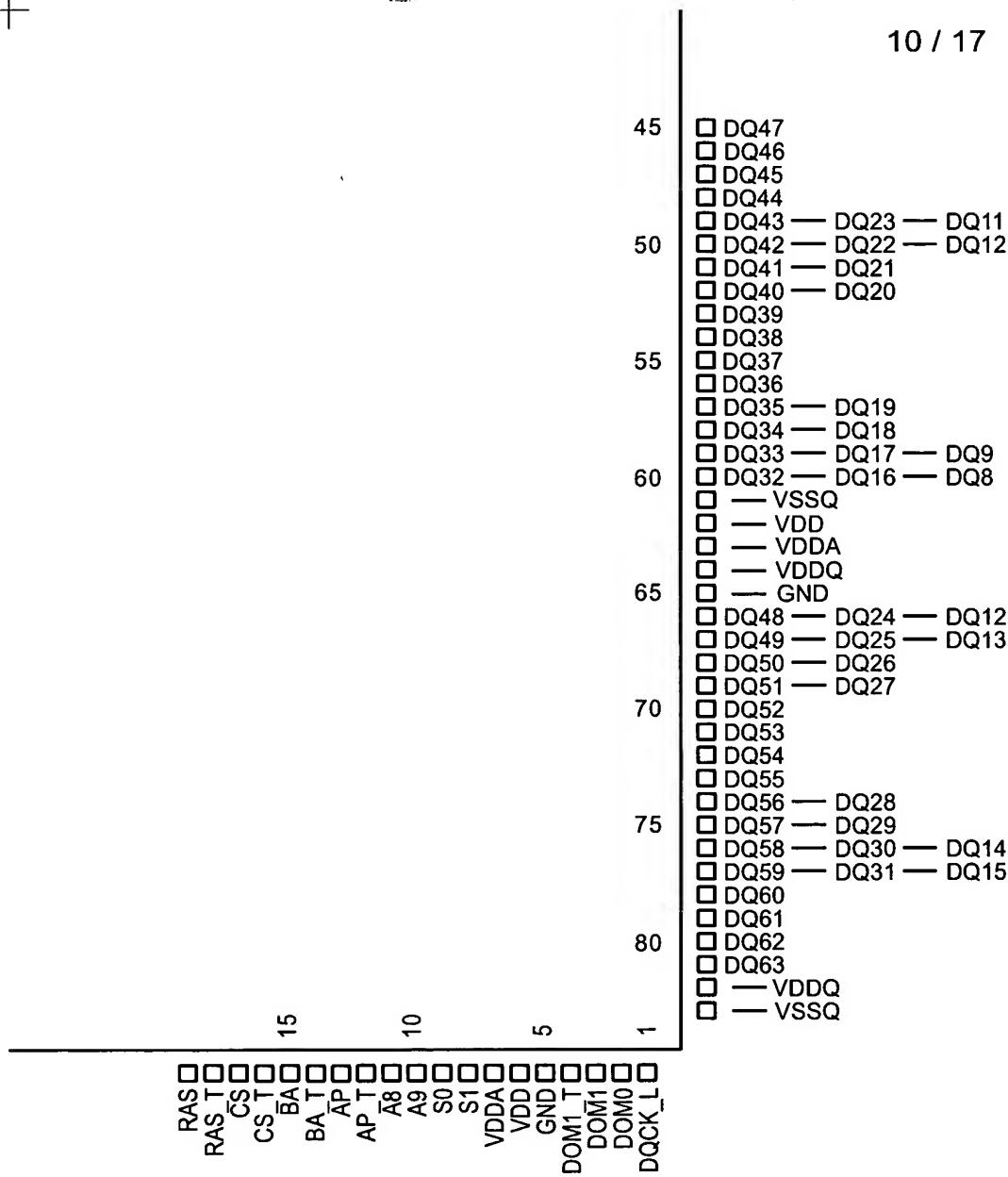


9 / 17



**FIG.\_9A-3**

10 / 17



**FIG.\_9A-4**

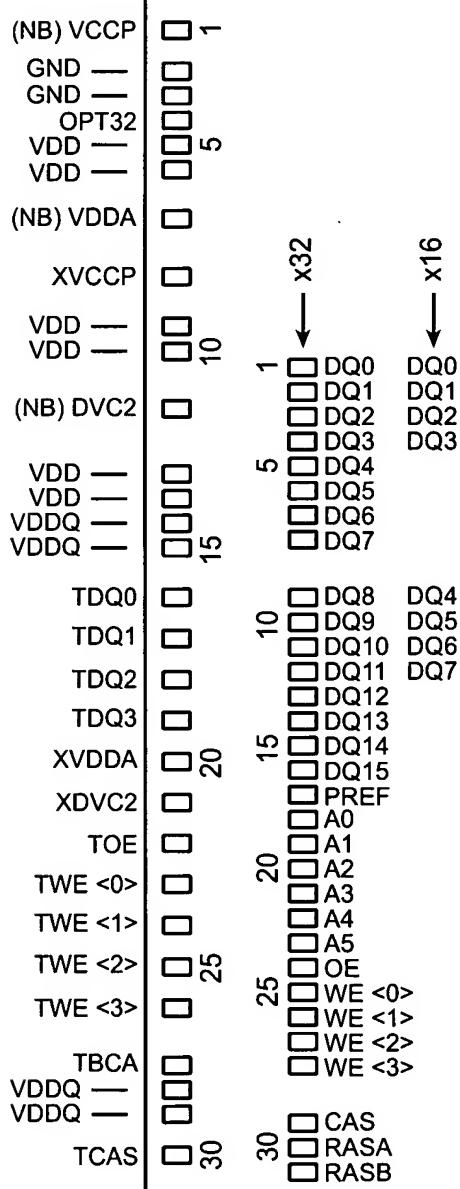
**FIG.\_9B**

**FIG.\_9B-1**

**FIG.\_9B-2**

200

**FIG.\_9B-1**



12 / 17

TRASA	□	A6
TRASB	□	A7
XVBB	□	A8
		A9
		A10
		A11
		BCA
RESET	□	35
TDQ4	□	40
TDQ5	□	40
TDQ6	□	40
TDQ7	□	40
(NB) VDDA	□	DQ16
VDDQ	—	DQ17
VDDQ	—	DQ18
GND	—	DQ19
GND	—	DQ20
		DQ21
		DQ22
		DQ23
		DQ24
	□	DQ25
	□	DQ26
	□	DQ27
	□	DQ28
	□	DQ29
	□	DQ30
	□	DQ31
(NB) OPTF	□	55
		TEST
GND	—	45
SET	□	DCAS
LOAD	□	
VDD	—	50
VDD	—	50
(NB) VBB	□	53

**FIG.\_9B-2**

**FIG.\_9C**

**FIG.\_9C-1**

**FIG.\_9C-2**

300

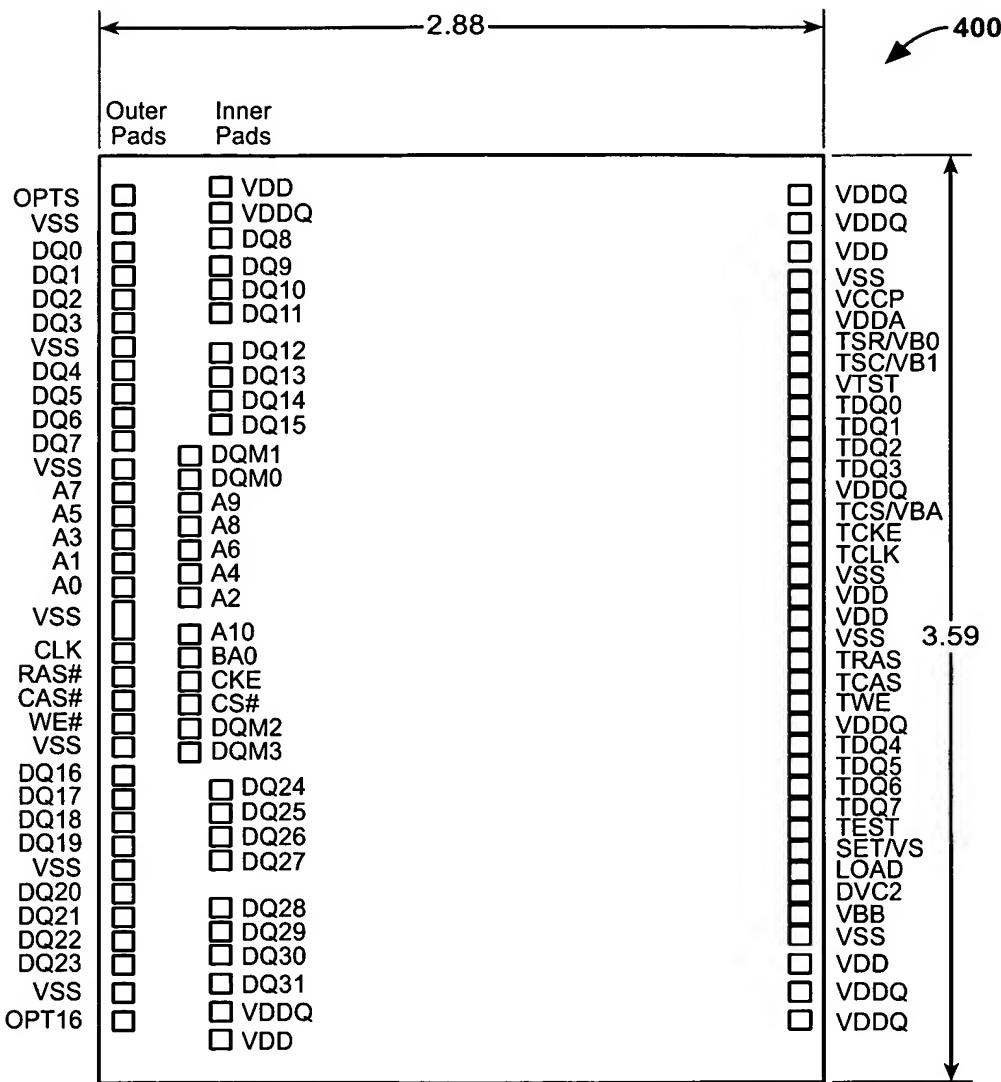
**FIG.\_9C-1**

VBB	1
SET	
GND	
OPTF	5
VDD	
DVC2	
TSC	
LOAD	
TSR	
TCKE	10
CKE	
DQ <9>	
GND	
VDDQ	
VDDQ	15
A <6>	
TD <7>	
TEST	
DQ <15>	
DQ <11>	20
VDDQ	
VDD	
GND	
A <9>	
DQ <14>	25
DQ <15>	
A <7>	
DQ <10>	
DQ <12>	
TCS	30
TCS	
TD <8>	
TD <5>	
TCLK	
TD <4>	35
TD <3>	
GND	
A <11>	
A <4>	
DQ <8>	40
DQMH	
A <12>	
OPTS	
CLK	
A <5>	45
A <8>	
DQVL	
TD <2>	
A <18>	
DQ <7>	50
TD <1>	
CS	
VDD	
VDDQ	
OPTXSH	55
DQ <5>	
DQ <3>	
OPTXSL	
GND	
GND	60

14 / 17

A <2>	
DQ <1>	
WE	
TD <8>	
TREDA <8>	65
DQ <2>	
TWE	
TCAS	
DQ <8>	
TREDA <1>	70
VDDQ	
VDCF	
CAS	
DQ <5>	
DQ <4>	75
BA <3>	
A <2>	
BA <1>	
VDD	
A <1>	80
A <3>	
RAS	
TRAS	
GND	84

**FIG.\_9C-2**

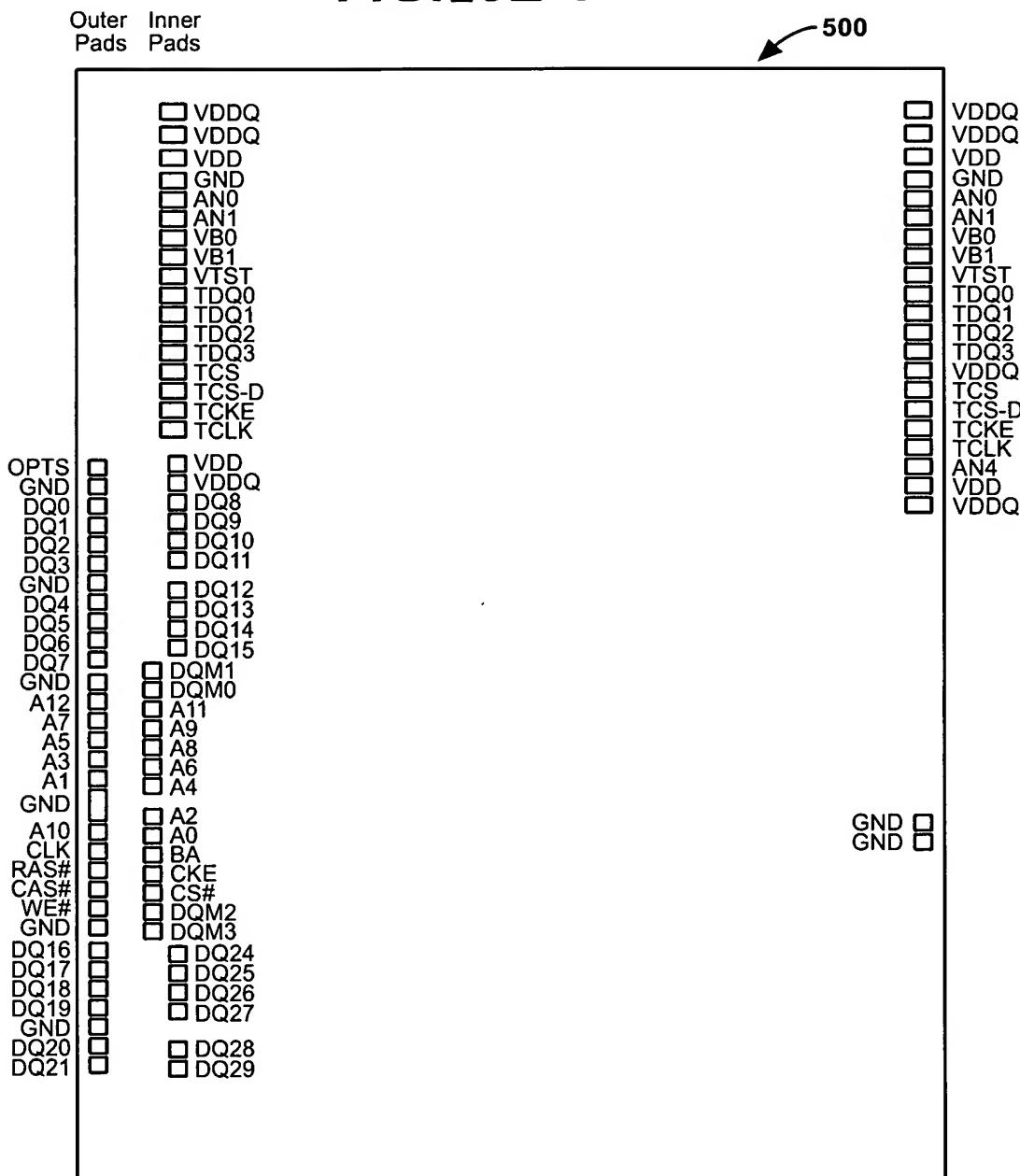


**FIG.\_9D**

**FIG.\_9E** **FIG.\_9E-1**

**FIG.\_9E-2**

**FIG.\_9E-1**



17 / 17



**FIG.\_9E-2**

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